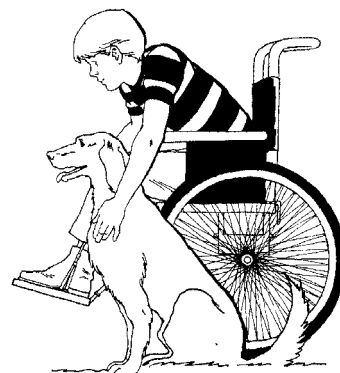




## Weighing and Measuring Children with Special Health Care Needs

Sandy Perkins, Maternal and Child Nutrition Consultant

It is critical that the growth of children with chronic illnesses or developmental disabilities be monitored and evaluated at regularly specified intervals since they may be at greater risk of growth problems. Unfortunately, some children cannot be weighed or measured using standard procedures and the purchase of special weighing and measuring equipment is not usually feasible. The following recommendations are offered which do not require the purchase of expensive equipment. It is necessary to use professional judgment in deciding which method is most appropriate for each situation. The technique used should be indicated on the growth chart to allow for consistency. If none of the recommendations seem appropriate, it is recommended that local providers contact the specialized clinic serving the children and arrange for the child to be measured at that facility at regular intervals.



### Weight

Children who cannot stand should be weighed on the infant scale regardless of their age. Children who are too large to be weighed on the infant scales can be weighed by weighing the parent and child. Weigh the parent alone and then subtract the parent's weight from the first weight to obtain the child's weight.

If a child has had an amputation, multiply the individual's actual weight by the percentage representing the missing body segment(s) (Table 1). Calculate an adjusted weight by adding that figure to the individual's weight. The adjusted weight can then be plotted on a standard growth chart.

Body Segment	Estimated % Total Body Weight
Hand	0.3
Forearm	2.6
Entire Arm	6.2
Foot	1.7
Below Knee	7.0
Above Knee	11.0
Entire Leg	18.6

Table 1 Estimated Percentage Total Body Weight of Common Amputations  
[http://www.amputee-coalition.org/inmotion/apr\\_may\\_96/healthy\\_diet.html](http://www.amputee-coalition.org/inmotion/apr_may_96/healthy_diet.html)

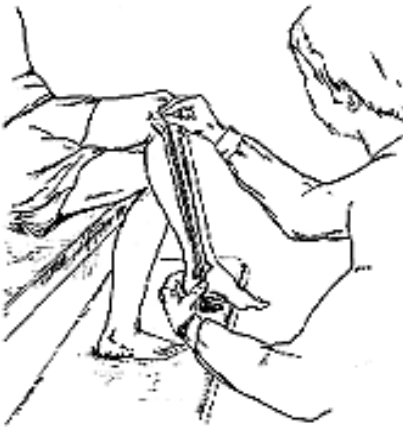
Certain conditions, such as wearing a cast, are temporary. If it is a temporary problem, it would be most practical to reschedule the visit for the child to be weighed and measured after the cast is removed.

## Stature

Children who are unable to stand should be measured using a recumbent length as long as possible. If a child has legs of unequal length, measure the longer leg.

When a child is too long to measure on the infant measuring board then an **arm span** measure can be used. Arm span measurements are made from the tip of the middle finger on the right hand to the tip of the middle finger of the left hand across the back. Arm span correlates well with height on a 1:1 ratio and can be plotted on a standard growth chart.

When a child cannot be measured linearly with accuracy and has arm contractures which will not allow for accurate arm span measurements, a **segmental length**, tibial length or crown rump, should be measured.



A tibial length (TL) can be used to estimate stature. The child may be either lying on a table or sitting upright with both the knee and ankle at ninety degree angles. Socks and shoes should be removed. Pants should be removed or rolled up past the knee. Measure from ankle to the joint line of the knee. To estimate stature in centimeters, multiple the tibial length (in cm) by 3.26 and add 30.8 ( $3.26 \times TL + 30.8$ ). This figure can be plotted on a standard growth chart.

A Crown Rump cannot be used to estimate stature, but it can assess linear growth over time. The equipment and technique are the same as for measuring length, except bend the child's legs and bring the footboard up against the buttocks. This measurement should be plotted on a standard growth chart, it will fall well

below the percentile increases follow the This on cannot to assign nutritional risk factors.



5<sup>th</sup> but should curve. informati be used WIC

## New Automation

Roger Lewis, WIC Project Director

The last three months have been a busy time: The Clinic representatives on the Steering Committee have been selected and the group has had its first meeting. The members are: Judy Seltzer, Reno Co HD; Eileen Filbert, Jefferson Co HD; Chuck Murphy, Riley/Manhattan HD; Barbara Beier, Shawnee Co WIC; Mary Ann Parkin, Franklin Co WIC; Alice Greig, Osborne Co WIC; David Thomason, KDHE Nutrition and WIC; Jim Rousseau, KDHE OIS; Linda Kenney, KDHE BCYF.

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Martha Hagen has been hired as the program specialist for the project. Previously she was the administrator for the McPherson Co Health Department and has worked in the WIC program in both McPherson and Harvey Counties. Her new job is to see that the right clinic and state people are involved in activities and to insure that the system being built will work for all clinics.

Proposals to transfer, modify, and operate a new WIC system in Kansas have been received from two companies: PDA and Starling Consulting. Evaluation of this material is underway, but information in the proposals cannot be shared until after a contract has been awarded.

Many clinic staff attending the WIC Technical Meeting were able to see and use demonstration versions of two modern WIC systems.



The most common comment was that the system is needed now.

The next step in the project is to select the best company to build our system. We can then update the project plan by replacing the estimated budget and schedule with actual information. This

information will be shared with all of the clinics and health departments and will signal the beginning of the real work.

## Local Agency News

### Welcome to these new employees:

Wyandotte County: Belma Gardner, LPN

Osage County: Rita Heckman, RN

Sedgwick County: Joyce Allen, Administrative Aide

Shawnee County: Angie Orester, clerk

Shawnee County: Shelly Leever, clerk

Shawnee County: Marla Wurtz, RN

### Farewell to these WIC employees:

Johnson County: Phyllis Cingle, clerk

### Congratulations to:

Helena Kilian, RN, Shawnee County on her retirement in March after 30 years.

Angie Hausheer, RN, Shawnee County on her retirement in March after 15 years with WIC.

## Meet The New NWS Staff



Martha Hagen, MS, RD, LD joined the state WIC staff in April to work with the computer automation

project. Martha worked as a nutritionist for the Harvey County WIC Program for 10 years and most recently was the Director of McPherson County Health Department for the last 3.5 years. She and her husband, Ken, are relocating to Topeka from McPherson and look forward to new experiences. Call Martha at 785-291-3161 or email at [mhagen@kdhe.state.ks.us](mailto:mhagen@kdhe.state.ks.us).



Mary Ann Gabel, MPA also joined the state WIC staff in April. Mary Ann serves as the liaison for the central and western region WIC agencies, CSFP agencies and PDA. She will also handle complaints and perform local agency management evaluations with her partner, Pat Dunavan. Mary Ann served as Executive Director of the Behavioral Sciences Regulatory Board from 1981-99 and most recently as a volunteer in the VITA program at El Centro of Topeka. You may contact Mary Ann at 785-296-1325, or by email at [mgabel@kdhe.state.ks.us](mailto:mgabel@kdhe.state.ks.us).

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### 2001 WTM Door Prizes

Child Nutrition Consultant

Sandy Perkins, Maternal and

Thank you to all the agencies/people/companies who donated such wonderful door prizes for the 2001 Technical Meeting and congratulations to the following winners.

Door Prize	Donated by	Winner
Pottery Bowl	Cowley County	Lori Ranker, Ellisworth County
Handcrafted Wooden Box of	Crawford County	Becky Curry, Cherokee County

goodies		
Kitchen Towel and gift surprise	Ellis County	Doris Tompkins, Stafford County
3 Posters	FoodandHealth.com	Diane Harrell, Wyandotte County
Dessert Mix	Geary County	Sharon Eggen, Cowley County
W P i Br st- ed g o o g	I C n e a f e i n p r m b a	Hodgeman County Ruth Miller, Rice County
	Kansas WIC Program	Penny Osborn, Douglas County
Breast-feeding promo bag	Kansas WIC Program	Barbara Gabriel, Geary County
Breast-feeding promo bag	Kansas WIC Program	Barb Herrman, Morris County
Cookie Jar	Lincoln County	Judy Wiseman, Elk Coungy
Pillow	Mary Washburn	Julie Rodrigues, Reno County
Breast-feeding poster	Mary Washburn	Laura Drake, Johnson County
Muffin Basket	Osborne County	Carla Mans, Osborne County
Basket of Goodies	Trego Count	Lori Wood, Edwards County
Clock	Welch's	Ernestine Pilcher, Wyandotte County
Clock	Welch's	Shirley Burkholder, Marion County
Candle and Towel	Wilson County	Judy Binns, Scott County

## PDA's Help Desk Is So Lonely!

Mary Ann Gabel, Program Consultant

All those who attended the PDA session on Monday during the WTM in Hutchinson appreciated the helpful information that the PDA staff presented. Participants raised a number of questions with PDA and it was discovered that several local agencies had experienced similar problems related to software issues. If local agencies had used PDA's Help Desk, these calls could have signaled PDA that there may have been a system-wide concern with its software program.

PDA reports that its Help Desk staff are lonely because they receive so few calls from local agencies. Don't struggle with the WIC software program, utilize the help that PDA makes available to all local agencies. Call the PDA Help Desk at 1-800-488.8799, select Option 3.

**There really are no advantages to breastfeeding,  
There are disadvantages of using breast milk substitutes.**

Mary K. Washburn, Breastfeeding Coordinator

Hylander, MA, DM Strobino and R Dhanireddy. "Human Milk Feedings and Infection Among Very Low Birth Weight Infants (VLBW)". *Pediatrics*, 1998;102:e38.

Investigators at Georgetown University Medical Center in Washington, DC, and the John Hopkins School of Hygiene and Public Health, Baltimore, MD, found that infection rates are significantly reduced in human milk-fed very low birth weight infants. Results of the study appear in the September 1998 on line edition of the journal [Pediatrics](#).

Researchers studied the effect of human milk feeding on infection incidence among very low birth weight (VLBW) infants during their initial hospitalization. The study consisted of all preterm infants weighing up to 1500 g at birth and hospitalized in the NICU. Infants who died before the start of enteral feeding were excluded. Only infections that occurred after the start of enteral feeding were considered.

Human milk feeding was defined as any human milk, regardless of supplementation with formula. Categories of high human milk consumption (80% or greater human milk) and partial human milk consumption (79% or less human milk) were also constructed based on a standard international definition of human milk feedings. The incidence of any infection and sepsis/meningitis are significantly reduced in human milk-fed VLBW infants compared with exclusively formula-fed VLBW infants.

## Notice Of Upcoming Satellite Downlink

September 27, 2001  
2:00 - 4:00 pm CDT

### Nutrition in Developmental Disorders and Managed Care

Presiding: Jane Garvin, MS, RD, LD

*Pat McKnight, MS, RD, LD* - Section Chief for

Community Outreach and Education, Bureau of Consumer & Program Support, Ohio Department of Human Services, Medicaid, Columbus, OH

*Michael Wilson, RN* - Bureau of Medicaid/Managed Care Quality Assurance, Ohio Department of Health, Columbus, OH

**Autism and Nutrition**  
Presiding; Shirley Ekvall,  
Ph.D, RD, FAAMD,

Physician to be  
determined

*Judy Converse, MPH, RD* - Nutrition Consultant, Nutrition Care for Children, and Cape Cod Development, Inc., Massachusetts Department of Health Early Intervention Program, and Parent.

*Bridgette Hires, MS, RD* - Nutritionist, University of Kentucky at Lexington

### Questions by Satellite

Locations and cost to be announced at a later date. Please contact Sandy Perkins at (785)296-1323 or [sperkins@kdhe.state.ks.us](mailto:sperkins@kdhe.state.ks.us) if you would like to receive more information.





## Check This Out!

Pat Dunavan, Nutrition Education Specialist

<http://www.justmove.org>

Sponsored by the American Heart Association, this site provides sound information on exercise for everyone's fitness category. An online fitness diary and exercise suggestions are available.

[www.soyfoods.com](http://www.soyfoods.com) is your one-stop site for anything to do with soy products. There are recipes for all types of soy foods from flour to tofu. Use this site if you want to add more soy to your diet or find new ways to use soy milk for clients with milk allergies.

<http://lancaster.unl.edu/ciq> provides you with a wealth of information on food preparation, food safety and nutrition. From the Lancaster County Extension office, this site is a source of sound information.

<http://206.86.69.253/index.html> Don't let the strange address keep you away from this site. It is the home of the California Project LEAN (lowfat eating in America now) program. This site offers information on their projects, consumer materials and a variety of links to other nutrition and physical activity sites.

<http://www.promom.org/101> Want new ideas on promoting breastfeeding? Check here for 101 reasons why to breastfeed. Research support is cited for many of the reasons. It provides you with suggestions on promoting breastfeeding to your community, to other professionals and your participants.

[www.foodsubs.com](http://www.foodsubs.com) This is the Cook's Thesaurus site. Everything you ever wanted to know about food items is here along with suggested uses for foods, food substitutions and much more. Check

this one  
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s.

## Low-Income Mothers See Obese Children As Normal And Healthy

Pat Dunavan, Nutrition Education Specialist

In a recent issue of *Pediatrics*, a study of low income families in Cincinnati has shown that low-income mothers often perceive their obese preschoolers as being "thick," "solid" and "healthy" rather than overweight.

The study was conducted by the Department of Pediatrics at the University of Chicago Children's Hospital and the Children's Hospital Medical Center of Cincinnati. The study assessed how mothers define obesity, and to determine what barriers healthcare staff face in helping parents manage the weight of young children.

The researchers conducted three focus groups involving 18 mothers whose 2-5 year olds were enrolled in WIC. Two thirds of the mothers were African-American, and all but one had a body mass index (BMI)  $\geq 25$ . All but one of the children were above the 85<sup>th</sup> percentile height for weight and 7 of the children had a BMI  $\geq 95^{\text{th}}$  percentile.

The study found that the mothers were often apprehensive about the growth charts used to assess weight and height. The charts were perceived to be

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judgmental and used to criticize parenting skills and stigmatize the child. They also found that none of the mothers believed that they had ever known a young child they considered to be obese.

Overweight was perceived by the groups as occurring when a child weighed so much that it limited

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Many

believed

child's weight was out of their control. They

blamed family genetics, an inability to control the

family diet, or an unwillingness to say no to a child demanding food.



movement

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children.

mothers

that as long

child had a

appetite and

diet, they

worry about

her weight.

mothers

that their

plays in any family

setting. A greater

level of success may

be achieved by directing education toward these

messages rather than labeling children as

overweight.

Jain, A., Sherman, S, Chamberlin, L, Carter, Y, Powers, S and Whitaker, R. "Why Don't Low-Income Mothers Worry About Their Preschoolers Being Overweight?" *Pediatrics*. 107:5. May 2001, 1138-1146.



## Help Parents Read Their Baby's "Sign Language"

Parents are often more confident in taking care of their new infant if they can read the signals that their baby is hungry. Offering to feed whenever the baby displays the following signs of hunger, even during sleep, not only ensures breastfeeding success, but also fosters a trust between parent and child.

### Signs of hunger include:

Sucking on tongue or lips during sleep

Moving arms and hands toward mouth

Fussing or fidgeting while asleep

Turning the head from side to side

Signs of satiety or fullness:

Falling asleep

The researchers concluded that when trying to help parents prevent childhood obesity, professionals should shift emphasis away from growth charts.

They suggested more focus on developing positive parenting skills regarding the child's eating and physical activity habits. They also stressed the importance of understanding the cultural role food



Relaxing the body  
Opening the fists  
Relaxing the forehead  
Letting go of the nipple

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